

MAG Park-and-Ride Study

January 2001



**MAG
Park and Ride Study**

Final Report

January 2001

prepared for:

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Introduction

On January 24, 2001, the Maricopa Association of Governments Regional Council approved the Draft Final Report and recommendations for twenty park-and-ride lot sites located throughout the Phoenix metropolitan region for addition to the next update of the MAG Long Range Transportation Plan. This report presents the approved recommendations, information about the recommended park-and-ride lot sites, and documents the process followed to develop these recommendations. These recommended sites were selected through an interagency planning process involving local jurisdictions, and regional and state agencies responsible for the planning and provision of transportation facilities and services in the Phoenix metropolitan region. The park-and-ride lots are located in coordination with the regional network of High Occupancy Vehicle (HOV) lanes and existing and planned regional transit services.

Currently the region has three publicly owned and operated park-and-ride lots in place (Dreamy Draw, 79th Avenue, and Deer Valley at I-17 and Bell Road). There are three additional leased lots, and approximately 60 other joint use lots for which informal agreements have been established with private property owners for shared parking arrangements. Ten of the park-and-ride lots described in this report have been recommended for short term implementation; funds have been allocated to proceed with implementation of these lots through MAG's TIP (Transportation Improvement Program).

Problem Statement and Project Objectives

Current and projected conditions in the Maricopa area have made it clear that the region needs to proceed with the implementation of expanded public transit services, supported by a regional system of park-and-ride lots for transit patrons, carpoolers and vanpoolers. Specific problems that have led to the need for this project include:

- Increasing congestion on freeways and arterials, resulting in increased travel times and pressure on local and regional arterials to serve increasing traffic;
- Air quality concerns in the region;
- Low transit/HOV use (around two percent of total trips), resulting in increasing pressure on the region's roadways, and low productivity for public transit services;
- Rapid regional growth in low density development patterns, resulting in inefficient travel patterns and overall increases in regional VMT (vehicle miles traveled); and
- Rapid development of land throughout the region, resulting in the potential loss of good park-and-ride sites.

While there are significant problems that need to be addressed, there are opportunities that make this a particularly good time to proceed with the park-and-ride lot development program, including:

- On-going expansion of regional public transit services through the passage of the light rail and bus rapid transit by Phoenix and transit initiatives of other local jurisdictions;
- The current effort to complete the regional freeway and HOV system, which will provide facilities for operation of competitive public transit services;
- Increasing traffic congestion and travel times, which improves the relative attractiveness of HOV travel modes to commuters; and
- Increased funding available through TEA-21, which enables completion of the freeway/HOV program, and substantial funding opportunities for implementation of the park-and-ride lot program.

Summary of the Planning Process

The MAG Park-and Ride Lot Site Selection Study was conducted between January 2000 and January 2001. The active involvement of local agency staff was critical to the success of this multi-jurisdictional project. Representatives of state, regional and local agencies participated in a series of Agency meetings held for the project. All MAG member agencies were invited to participate. Project participants included staff from ADOT, MAG, Maricopa County, RPTA, and the Cities of Avondale, Chandler, Gilbert, Glendale, Goodyear, Mesa, Peoria, Phoenix, Scottsdale, Surprise, Tempe, and Tolleson. Representatives from these agencies met eight times over the course of the project to guide the project, review the technical work done for the project, and to develop the project recommendations.

Final Report – Summary

This document provides complete documentation of the work done for each of the tasks included in the park-and-ride lot site selection study. Seven major reports were prepared for this study, documenting the work of each of the major project tasks. Information about each of the reports is summarized below. Complete copies of each report are included in the following sections of this Final Report.

Section 1 – Executive Summary

The *Executive Summary* provides a summary of the overall project, with an emphasis on the project recommendations. The Summary includes information on the project background and objectives, the planning process and major project tasks and activities, the evaluation process used to select and evaluate target areas and individual park-and-ride lot sites, and the recommended sites for near-term and long-term development. Each of the recommended sites is described in terms of its relative priority for implementation, the target area and jurisdiction(s) in which it is located, and the capital cost estimated to develop the site.

Section 2 - Literature Review and Other Research

Task 2 Report

Task 2 included several different activities designed to provide the background information needed to proceed with the study. The results of these activities are documented in the Task 2 Report, which documents the characteristics of successful park-and-ride lots based on a literature search and surveys of transit agencies acknowledged to have successful park-and-ride lot programs in the western United States (namely Seattle, Portland, Denver and Houston).

Second, this report documents the facilities and services currently provided in the study area and those proposed for the future, which would provide incentives to potential park-and-ride lot users (HOV lanes, new freeway segments, new access ramps, transit service plans, and existing small park-and-ride facilities). The document presents information on various park-and-ride lot demand forecasting techniques and presents the approach recommended for use in the MAG Park and Ride Lot Study. This report also includes a preliminary NEPA (National Environmental Policy Act) Purpose and Need Statement (revised draft, December 2000).

Section 3 - Selection and Design Criteria

Task 3 Report

The purpose of the Task 3 Report is to provide information on design guidelines used by the RPTA and other agencies in the Maricopa area in the design of transit and ridesharing facilities. The guidelines are intended for use by state agencies, public works and planning departments, developers, and interested individuals. The objective of including this information in this study is twofold. The primary objective is to encourage the inclusion of transit and ridesharing facilities in the initial design stages of freeway, roadway and new development; a second objective is to inform agency staffs how to site and design their facilities.

Rather than presenting detailed engineering specifications for park-and-ride facilities, the report provides an overview of a typical facility, including descriptions for key characteristics, basic dimensions, design criteria and accepted standards. The dimensions presented in the report are intended as recommended standards. They may need to be modified in individual cases to meet site constraints or applicable local, state and federal land use and permit requirements.

Section 4 - Target Area Evaluation

Task 4 Report

This report documents the evaluation of 32 target areas studied for the park-and-ride lot study. The report is organized into three parts. The first part describes the criteria used to evaluate the target areas, along with a description of the rationale for assigning scores (+, 0, or -) to measure the target areas against the criteria. Part two of the report provides detailed information on each of the 32 target areas, including a map of the target area

showing the boundaries of the area examined, major streets and freeways, and the proposed regional express bus routes in the area. Part tree includes a matrix with comparative information on each of the target areas and their relative performance against the evaluation criteria.

Section 5 - Site Evaluations

Task 5/6 Report

This report presents the results of the evaluation of potential park-and-ride lot sites identified for each of the target areas selected in Task 4. The individual sites were evaluated using the evaluation criteria developed for this study. MAG, the RPTA, ADOT and local jurisdictions participated in the development of the criteria and in the evaluation of the sites. The criteria address issues related to land availability and compatibility with surrounding uses, opportunities for joint development and/or use, the availability of regional and local bus service, a variety of design issues, environmental considerations, site location in relation to freeway congestion, access to HOV lanes and ramps, costs, support by appropriate jurisdictions, demand, and potential community related issues.

The evaluation criteria and the measures used to assign ratings (+, 0 or –) are described in the first part of the report. The second part of the report includes detailed information on the evaluation of two to five sites within each target area. A summary of all sites within each target area is included, along with evaluation sheets and aerial photographs for all of the sites evaluated within each of the 20 selected target areas.

Section 6 - Management and Operations Plan

Task 7 Report

The Task 7 Report provides information on operation and maintenance cost estimates for new park-and-ride lots. An assessment was made of typical operations and maintenance costs for existing park-and-ride facilities in other cities in the western United States (Denver, Houston, Portland Seattle, and San Diego). This information was used as input to the development of prototypical costs for the Phoenix area. The worksheet developed for use by local jurisdictions to estimate operating and maintenance costs for lots located within their jurisdictions is included in this report.

In addition, the report includes sample agreements for different contractual arrangements that might be used for on-going park-and-ride lot operation, including: public ownership/public operations and maintenance; public ownership/private-contracted operations and maintenance; public ownership/lease to businesses for shared use/public vs. private-contracted operations and maintenance; and private ownership/lease to public jurisdiction/public vs. private-contracted operations and maintenance.

Section 7 - Programming

Task 8 Report

This section includes information on the financial programming of funds for implementation of the recommended park-and-ride lot program over the next five years. In addition, copies of letters from local jurisdictions confirming their support for sites within their respective jurisdictions are included in this section.

Section 8 – Agency and Public Involvement

Task 9 Report

The final section of this Report includes information on the planning process used to develop the park-and ride lot recommendations. In addition this section includes a list of the attendees at the MAG Park-and-Ride Site Selection Agency Forums, and copies of the agendas for the eight agency forums.